

ABSTRACT

An organic semiconductor device includes at least p-type and n-type channel organic semiconductor elements. Each organic semiconductor element includes a pair of a source electrode and a drain electrode which are facing each other, an organic semiconductor layer deposited between the source electrode and the drain electrode such that a channel can be formed therebetween, and a gate electrode which applies a voltage through a gate insulating layer to the organic semiconductor layer provided between the source electrode and the drain electrode. The source electrode and the drain electrode of the p-type channel organic semiconductor element are made of materials having values of work function higher than those of the source electrode and the drain electrode of the n-type channel organic semiconductor element respectively.